

## *Onyccaridella prima* Bruce, 1981, a rare pontoniine shrimp from Darwin Harbour (Crustacea: Decapoda: Pontoniinae)

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### ABSTRACT

The second occurrence of the pontoniine shrimp *Onyccaridella prima* Bruce, 1981 is recorded. The single specimen was found in a sponge host collected from Darwin Harbour, Northern Territory, Australia. The species is otherwise known only from the type specimens from Heron Island, Queensland.

KEYWORDS. *Onyccaridella prima*, Crustacea, Pontoniinae, Darwin Harbour, sponge associate, Australia.

### INTRODUCTION

In the course of a survey of the marine fauna of the Port of Darwin, carried out by marine scientists from CSIRO Centre for Research on Introduced Marine Pests (CRIMP) and staff of the Museums and Art Galleries of the Northern Territory in 1998, a single specimen of a small pontoniine shrimp was obtained from a sponge host collected from harbour piles. The specimen was identified as *Onyccaridella prima*, a species previously known only from the two type specimens collected in 1979 from Heron Island in the Capricorn Islands of the Great Barrier Reef. The new specimen of this apparently rare shrimp is here described and compared with the type material from Queensland.

Abbreviations used: CL, post orbital carapace length; NTM, Museum and Art Gallery of the Northern Territory.

### SYSTEMATICS

#### *Onyccaridella prima* Bruce, 1981

(Fig. 1)

*Onyccaridella prima* Bruce, 1981a: 243-250, figs. 1-6.

**Material examined.** 1 ovig. ♀, stn NTD FHI PI-3, Fort Hill Wharf, Port of Darwin Harbour, 12°28.322'S 130°50.826'E, depth 3-9 m, collected by hand from pile scrapings, 15 August 1998, coll. CSIRO CRIMP team, NTM Cr012795.

**Description.** A stout shrimp, with body sub-cylindrical, slightly compressed anteriorly, with relatively large abdomen. Generally as in original description.

Rostrum about 0.22 of CL, acute, slender, depressed, slightly up-turned, unarmed. Carapace (Fig. 1A) about as long as maximal depth, smooth, devoid of spines and teeth. Abdomen slightly compressed, with first three pleura broadly expanded.

Chelae of second pereiopods similar, only slightly unequal; major chela (Fig. 1B) with fingers 0.47 of palm length; minor chela (Fig. 1C) fingers 0.57 of palm length, dactyls with sinuous entire cutting edges.

Third pereiopods with propod stout, bearing two short stout distoventral spines; dactyl (Fig. 1D) with distinctly demarcated unguis, corpus with ventral cutting edge straight, without distal accessory tooth, with several small denticles proximally.

Ova numerous, small.

**Measurements.** CL 3.3 mm; length of ovum 0.8 mm.

**Host.** *Mycale* sp., [Porifera: Mycalidae], possibly *Mycale (Aegagropila)* cf. *obscura* (Carter).

**Distribution.** Previously reported only from the type locality, Heron Island, Capricorn Islands, Queensland, on the southern Great Barrier Reef, at 12 m depth.

**Remarks.** The single specimen is complete and in good condition and in general agrees well with the original description. With a CL of 3.3 mm, it is considerably larger than both the type specimens (♂ allotype 1.8 mm; ♀ holotype 1.75 mm) suggesting that both of these were juvenile specimens. With ova, the present specimen is clearly an adult. In the adult, the carapace length is less than the carapace depth, whereas in the juvenile types it is greater (Fig. 1E), the rostrum is also more depressed, without a small preterminal dorsal tooth as in the holotype. In the holotype female the second pereiopod chelae are markedly unequal in size (2.0:1.0), in the present specimen they are only slightly unequal (1.09:1.0), with the major chela

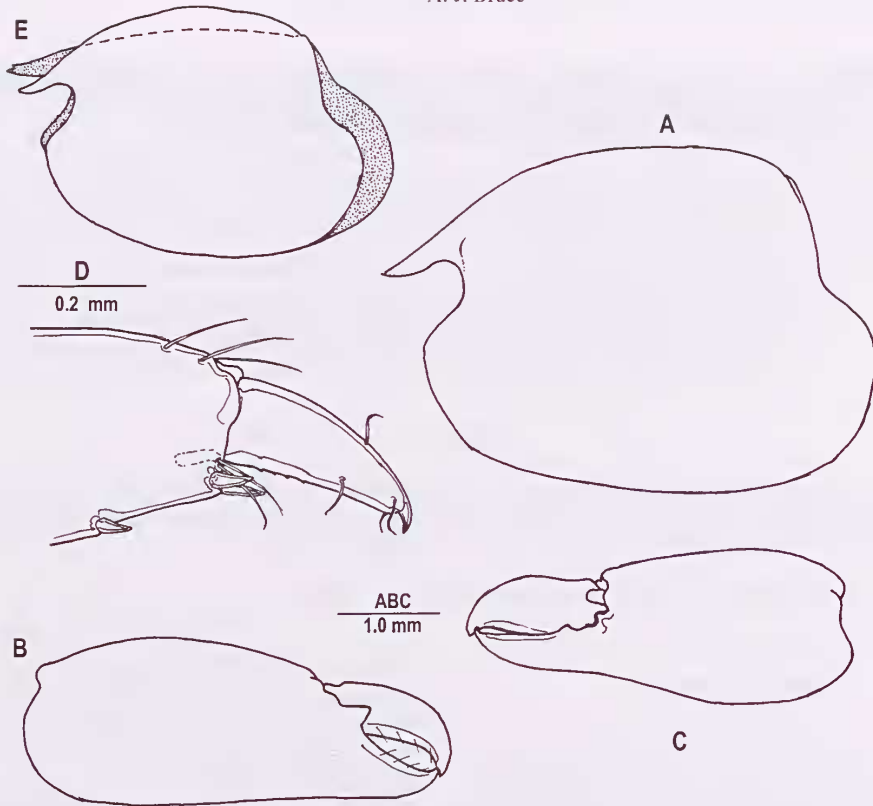


Fig. 1. *Onycozoidella prima* Bruce, ovigerous female, Darwin Harbour, NTM Cr012795. A, carapace, lateral. B, second pereiopod, major chela. C, same, minor chela. D, third pereiopod, distal propod and dactyl. E, comparison of carapace shapes in adult and juvenile (stippled) specimens to show relative profiles (not to scale).

relatively smaller, 1.29 times the CL, as opposed to 2.0 times the CL in the holotype. The ambulatory dactyl of the third pereiopod is essentially as in the holotype but lacks the small distoventral accessory tooth and the distal ventral margin of the corpus appears unarmed. The absence of these small denticles may be merely the result of abrasion. The proximal ventral margin bears about six minute denticles.

The host sponge has not been identified with full certainty. The preserved sample contained representatives of several sponge genera (J.N.A. Hooper, personal communication), but these included material referable to a *Mycale*, possibly *Mycale* (*Aegagropila*) cf. *obscura* (Carter). As the type specimens of *O. prima* were found in association with *Mycale sulcata* Hentschel, it is most probable that this further *Mycale* was the host of the present specimens.

The key to the genus *Onycozoidella* Bruce, accompanying the original description of *O. prima* remains valid (Bruce 1981a). The two other species of the genus, *O. stenolepis* (Holthuis, 1952) and *O. monodoa* (Fujino and Miyake, 1969) have also both been recorded in Australian waters, also from Heron Island (Bruce 1981b, 1983).

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#### REFERENCES

- Bruce, A.J. 1981a. *Onycozoidella prima* gen. et sp. nov., a new pontoniine sponge-associate from the Capricorn Islands, Australia (Decapoda Caridea: Pontoniinae) *Journal of Crustacean Biology* 1(2): 241-250.
- Bruce, A.J. 1981b. Pontoniine shrimps of Heron Island. *Atoll Research Bulletin* 245: 1-33.
- Bruce, A.J. 1983. The pontoniine shrimp fauna of Australia. *Australian Museum Memoirs* 18: 195-218.
- Fujino, T. and Miyake, S. 1969. Studies on the genus *Onycozoidella* with descriptions of five new species (Crustacea, Decapoda, Palaemonidae). *Journal of the Faculty of Agriculture, Kyushu University* 15: 403-448.
- Holthuis, L.B. 1952. The Decapoda of the Siboga Expedition. Part XI. The Palaemonidae collected by the Siboga and Snellius Expeditions with remarks on other species. II. Subfamily Pontoniinae. *Siboga Expedition Monograph* 39a10: 1-252.

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